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1979
INLAND WATERBORNE COMMERCE STATISTICS

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Introduction

Dear Friend:

The barge and towing industry is a healthy, vital segment of the U.S. transportation system. It consists of some 1,800 companies operating on a system of 25,543 miles of navigable inland and intracoastal waterways, serving 87 percent of major U.S. cities. It operates a fleet of 4,492 towboats and tugboats with a combined horsepower of 6.6 million, powering a fleet of 29,420 barges with a capacity of 42.4 million tons.

This book, Inland Waterborne Commerce Statistics, 1979, illustrates the growth and strategic importance of the industry by showing total tonnages and total ton-miles moved by the entire system and on each major navigable river, intracoastal waterway and canal.

A description of each waterway, with its navigable length, precedes each discussion. Net tons and ton-miles are shown for the early and middle 1970s, as well as for 1979. In the center of this book is a map, showing locations for each of the waterways discussed.

This book also shows that in 1979, the last year for which figures are available, barges carried more than 656 million tons of freight or about 61 percent of the over one billion tons of total domestic waterborne traffic.

It demonstrates that in an era of energy shortages and increasing U.S. dependence on domestic coal, over 60 percent of the products transported by barge are energy-related, i.e., 39.7 percent consist of petroleum and petroleum products and 20.7 percent consist of coal and lignite.

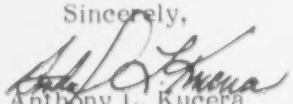
In addition to energy products, the industry moves building materials (14.2 percent); grain and grain products (9.4 percent); chemicals (7.3 percent); and, in substantial quantities, more than 100 other kinds of bulk materials, including iron and steel products, lime, fertilizer, logs, marine shells, etc.

With respect to agricultural products, in 1979 barges handled 35.5 percent of U.S. grain destined for export. (This figure has grown dramatically in the past several years, surpassing 40 percent in 1980.)

The industry has three inherent advantages to offer shippers, receivers and the public. It is the lowest cost, most energy efficient and safest transportation mode.

The data are compiled from the latest reports issued by the Waterborne Commerce Statistics Center of the Army Corps of Engineers. The compilations and comparisons are prepared by the Research Department of The American Waterways Operators, Inc., and are published annually as a public information service.

Sincerely,



Anthony L. Kucera
President
The American Waterways Operators, Inc.

COMMERCIALLY NAVIGABLE WATERWAYS OF THE UNITED STATES BY LENGTHS AND DEPTHS[1]

Group	Lengths in Miles of Waterways					
	Under 6 ft.	6 to 9 ft.	9 to 12 ft.	12 to 14 ft.	14 ft. & Over	Total
Atlantic Coast Waterways	1,426	1,241	584	938	1,581	5,770
Atlantic Intracoastal Waterway-Norfolk, VA, to Key West, FL	—	65	65	1,104	—	1,234
Gulf Coast Waterways	2,055	647	1,133	79	378	4,292
Gulf Intracoastal Waterway-St. Marks, FL, to the Mexican Bordern	—	—	—	1,137	—	1,137
Mississippi River System	2,020	969	4,957	740	268	8,954
Pacific Coast Waterways	730	498	237	26	2,084	3,575
Great Lakes	45	89	—	8	348	490
All Other Waterways	76	7	—	1	7	91
GRAND TOTAL	6,352	3,516	6,976	4,033	4,666	25,543

[1] The mileages in this table represent the lengths of all navigable channels of the United States, including those improved by the federal government, other agencies, and those that have not been improved but are usable for commercial navigation.

1979 FREIGHT TON MILES BY MODE
(MILLIONS)

Mode	1979 Ton Miles	Percent
Air carrier	4,407	.2
Oil pipeline	608,300	24.8
Rail	902,059	36.9
Highway	628,000	25.7
Inland waterways	302,903	12.4
TOTAL	2,445,669	100

Source: National Transportation Statistics, Department of Transportation

NUMBER OF TOWING VESSELS AND BARGES OF THE UNITED STATES
OPERATED FOR THE TRANSPORTATION OF FREIGHT AS OF OCTOBER 1, 1979

Types of Vessels	Mississippi River System and the Gulf Intracoastal Waterway	Atlantic, Gulf and Pacific Coasts	Great Lakes System	Total
SELF-PROPELLED				
Towboats and Tugs				
Number of Vessels	2,722	1,623	147	4,492
Horsepower	4,224,297	2,280,189	141,655	6,646,141
NON-SELF-PROPELLED				
Dry Cargo Barges and Scows				
Number of Vessels	21,042	4,165	213	25,420
Cargo Capacity (net tons)	27,110,036	4,656,519	326,513	32,093,068
Tank Barges				
Number of Vessels	3,332	637	31	4,000
Cargo Capacity (net tons)	6,884,322	3,387,419	62,936	10,334,677
Total Non-Self Propelled				
Number of Vessels	24,374	4,802	244	29,420
Cargo Capacity (net tons)	33,994,358	8,043,938	389,449	42,427,745

Source: U.S. Army Corps of Engineers

NUMBER OF TOWING VESSELS AND BARGES OF THE UNITED STATES
OPERATED FOR THE TRANSPORTATION OF FREIGHT FOR THE YEARS 1976-1979

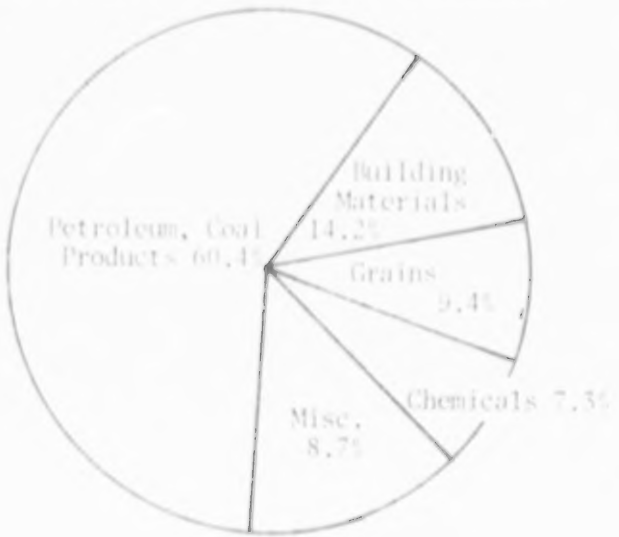
Types of Vessels	1976	1977	1978	1979
SELF-PROPELLED				
Towboats and Tugs				
Number of Vessels	4,240	4,379	4,380	4,492
Horsepower	5,585,891	6,161,348	6,390,438	6,646,141
NON-SELF-PROPELLED				
Dry Cargo Barges and Scows				
Number of Vessels	23,164	24,937	24,037	25,420
Cargo Capacity (net tons)	27,135,336	29,454,921	29,838,851	32,093,068
Tank Barges				
Number of Vessels	3,623	3,770	3,946	4,000
Cargo Capacity (net tons)	8,510,016	9,519,840	9,467.565	10,334,677
Total Non-Self-Propelled				
Number of Vessels	26,787	28,707	27,983	29,420
Cargo Capacity (net tons)	35,645,352	38,974,761	39,306,416	42,427,745

Source: U.S. Army Corps of Engineers

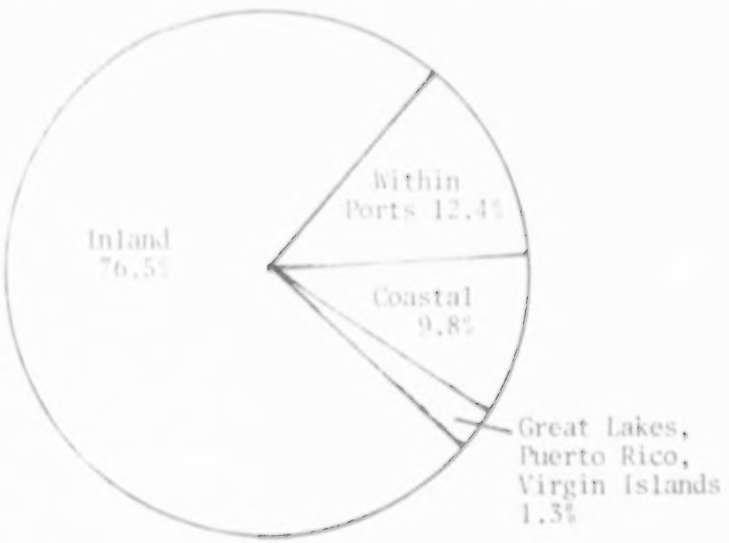
THE SCOPE OF THE BARGE AND TOWING INDUSTRY

The barge and towing industry carried 656 million tons of freight in 1979, 61 percent of total domestic marine traffic. Barge traffic moves on the inland waterways, within ports, on the coastal waters of the United States, on the Great Lakes and between ports in Puerto Rico and the Virgin Islands.

BARGE TRANSPORTATION BY COMMODITY



BARGE TRANSPORTATION BY WATERWAY SYSTEM



BARGE TRAFFIC AND KEY ECONOMIC INDICATORS

Year	Barge Traffic (Millions of tons)	GNP ($ billion) (1972)	Industrial Production Index (1967=100)
1970	562.2	1,075	108
1971	581.3	1,108	110
1972	623.1	1,171	120
1973	625.1	1,235	130
1974	622.3	1,218	129
1975	610.0	1,202	118
1976	637.6	1,273	131
1977	640.2	1,341	138
1978	662.2	1,399	146
1979	656.6	1,432	153

DOMESTIC BARGE TRAFFIC[1]
1970-1979
(Thousands of net tons)

Year	Grains	Coal	Petroleum and Products	Sand, Gravel and Stone	Chemicals and Fertilizers	Total All Commodities
1970	27,052	122,859	215,865	71,067	43,471	562,156
1971	28,324	113,963	232,641	79,460	46,496	581,314
1972	36,320	123,846	251,004	76,918	51,327	623,063
1973	35,984	120,711	256,504	78,705	49,846	625,146
1974	39,785	122,582	245,151	73,738	51,570	622,319
1975	44,434	130,683	244,000	65,851	46,612	610,039
1976	54,747	132,578	264,436	59,163	48,628	637,641
1977	52,324	133,992	270,942	56,793	54,182	640,163
1978	58,730	120,825	281,474	69,350	53,002	662,197
1979	58,991	135,953	260,473	67,670	56,316	656,648

[1] Includes not only inland waterways traffic, but also coastwise shipments by barge. Thus, total annual tonnages will be somewhat higher than those reported on the following page.

TRAFFIC TRANSPORTED ON INLAND WATERWAYS OF UNITED STATES (Exclusive of Great Lakes)[1]

Year	Net Tons Of 2,000 Pounds[1]	Ton-Miles
1940	183,417,791	22,411,961,000
:	:	:
1965	472,480,483	152,812,240,000
1966	489,066,210	164,528,798,000
1967	500,912,733	174,582,978,000
1968	520,904,639	179,336,707,000
1969	548,481,358	187,666,323,000
1970	553,598,222	204,084,966,000
1971	560,470,417	210,003,291,000
1972	597,255,337	229,754,230,000
1973	596,459,513	232,307,988,000
1974	599,219,554	247,430,888,000
1975	582,211,482	243,038,688,000
1976	607,703,665	267,216,851,000
1977	612,149,130	277,580,717,000
1978	624,015,527	290,396,521,000
1979	628,082,832	302,902,779,000

1. Known duplications resulting from reporting of identical shipments over two or more waterways have been eliminated except that the figures for 1965 and subsequent years represent originated traffic.

COASTAL AND COASTWISE TRAFFIC[2]

Year	Net Tons Of 2,000 Pounds	Ton-Miles
1958	194,050,174	304,770,000,000
:	:	:
1965	201,508,107	302,545,000,000
1966	208,374,966	306,766,000,000
1967	214,646,527	310,429,000,000
1968	214,250,535	304,480,000,000
1969	216,707,773	300,948,000,000
1970	238,440,385	359,784,000,000
1971	242,916,056	360,205,000,000
1972	242,660,087	351,509,000,000
1973	236,794,660	327,649,000,000
1974	233,358,124	322,802,209,000
1975	231,932,437	315,845,946,000
1976	236,278,624	322,932,250,000
1977	248,083,336	343,536,591,000
1978	305,342,824	540,373,236,000
1979	304,665,522	532,290,272,000

2. Applies to domestic traffic receiving a carriage over the ocean or the Gulf of Mexico, e.g., New Orleans, to Baltimore, New York to Puerto Rico, San Francisco to Hawaii, or Puerto Rico to Hawaii. Traffic between Great Lakes ports and seacoast ports, when having a carriage over the ocean, is also termed coastwise.

PRINCIPAL COMMODITIES TRANSPORTED ON THE INLAND WATERWAYS OF THE UNITED STATES (EXCLUSIVE OF THE GREAT LAKES) IN NET TONS OF 2,000 POUNDS—CALENDAR YEARS 1977, 1978 AND 1979

Commodity	1977	1978	1979
Grain and grain products	39,916,166	43,751,953	45,007,504
Soybeans	11,684,156	14,207,752	13.253,677
Fresh fish and shellfish	1,655,316	1,430,870	1,953,432
Menhaden	762,015	948,205	420,367
Marine shells, unmanufactured	12,148,007	10,319,703	8,801,217
Iron ore and concentrates	5,685,031	5,386,658	5,663,949
Aluminum ore and concentrates	930,884	627,565	443,301
Manganese ores and concentrates	611,833	708,111	940,354
Nonferrous ore concentrates, n.e.c.	789,489	880,127	988,411
Coal and Lignite	130,386,114	117,575,202	133,245,659
Crude petroleum	54,076,354	56,599,083	52,755,936
Limestone	1,748,972	2,549,916	3,088,437
Sand, gravel and crushed rock	55,404,297	65,640,164	65,735,803
Clay and structural clay products	1,843,138	1,947,777	2,020,384
Sulphur, dry and liquid	4,513,728	4,293,018	4,996,681
Nonmetallic minerals, n.e.c.	5,106,808	5,616,421	5,054,963
Sugar	943,472	893,247	703,601
Molasses	852,938	676,105	526,947
Vegetable oils, margarine, shortening	1,128,752	1,346,101	1,369,295
Logs	635,736	654,159	635,885
Rafted logs	16,280,176	17,120,788	17,032,909
Pulpwood, log	1,404,167	1,721,884	1,599,822
Lumber and wood products, exc. furniture	2,590,812	2,164,617	1,969,177
Pulp	844,773	855,682	765,990
Paper and paper products	2,160,798	1,874,058	1,735,791
Sodium hydroxide	3,981,234	3,770,050	3,886,218
Crude tar, oil, gas products	1,713,611	1,569,476	1,693,415
Alcohols	2,401,532	2,479,917	2,536,614
Benzene and toluene	3,694,202	3,404,763	3,515,067
Sulphuric acid	2,488,280	2,158,086	2,045,742
Basic chemicals and products, n.e.c.	13,242,616	15,150,090	17,588,107
Fertilizer and fertilizer materials	7,958,539	8,323,339	8,749,652
Gasoline	39,257,866	37,814,677	34,452,879
Jet fuel	5,760,672	5,100,481	4,748,271
Kerosene	2,314,792	2,001,944	1,790,257
Distillate fuel oil	42,013,920	39,424,821	36,224,816
Residual fuel oil	78,628,128	83,710,603	78,710,334
Lubricating oils and greases	2,720,002	2,667,341	2,653,743
Naphtha, petroleum solvents	2,973,843	3,299,798	4,597,114
Asphalt tar and pitches	4,900,087	5,139,190	4,243,325
Coke, petroleum coke	2,648,198	3,286,315	3,754,875
Liquefied gases	1,078,882	1,060,898	901,660
Other petroleum and coal products	2,245,555	2,026,782	2,709,349
Building cement	4,462,148	3,938,671	4,133,153
Lime	871,747	814,437	1,033,766
Miscellaneous nonmetallic mineral products	594,989	590,312	496,664

(continued)

Commodity	1977	1978	1979
Slag	887,886	861,801	661,245
Iron and steel products (w/ferroalloys)	6,559,961	7,093,853	7,909,072
Fabricated metal products	552,216	205,454	211,214
Miscellaneous manufactured products	1,768,858	1,929,417	1,589,753
Iron and steel scrap	1,680,386	2,231,688	2,550,006
Waste and scrap, n.e.c.	12,046,685	15,953,166	13,903,355
Water	3,472,741	2,845,873	3,121,395
Other commodities	5,123,702	5,373,138	6,962,279
GRAND TOTAL	612,149,130	624,015,527	628,082,832

Alabama River

SECTION: From Wetumpka, Alabama, to mouth at confluence with Mobile River - 313 miles

CONTROLLING DEPTH: 9 FEET

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	1,333,058	120,520,255
1972	1,582,028	112,959,812
1973	2,149,004	151,317,633
1974	2,120,533	157,812,590
1975	2,247,812	190,050,504
1976	1,714,381	154,396,376
1977	1,684,117	138,769,529
1978	1,966,874	163,979,844
1979	2,028,366	230,942,373

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons
Soybeans	71,788
Crude petroleum	34,999
Sand, gravel, crushed rock	1,529,263
Pulpwood, log	83,499
Wood chips, staves, moldings	145,999
Fertilizers	38,192
Residual fuel oil	63,676
Miscellaneous	60,950
GRAND TOTAL	2,028,366

Allegheny River

SECTION: From Pittsburgh, at the confluence with the Ohio River, to above East Brady, Pennsylvania, improved portion - 72 miles

CONTROLLING DEPTH: 9 feet; Open channel portion above East Brady

TOTAL ANNUAL TRAFFIC

	Improved Portion		Open Channel Portion	
Year	Net Tons	Ton-Miles	Net Tons	Ton-Miles
1971	5,946,165	80,643,101	212,500	1,087,000
1972	5,425,369	80,024,511	72,892	422,034
1973	5,317,340	83,101,087	167,060	810,420
1974	5,532,052	87,302,440	130,332	808,110
1975	5,362,206	85,780,386	--	--
1976	4,981,158	78,598,435	--	--
1977	5,084,990	89,243,482	--	--
1978	4,404,714	79,462,989	--	--
1979	4,819,088	89,072,521	--	--

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

	Net Tons	
Commodity	Improved Portion	Open Channel Portion
Manganese ores, concentrates	39,304	No commerce reported for: 1975-1979
Nonferrous ores, concentrates, n.e.c	14,002	
Coal and lignite	2,493,045	
Sand, gravel, crushed rock	1,374,846	
Clay and structural clay products	23,880	
Nonmetallic minerals, n.e.c.	69,170	
Wheat flour and semolina	45,490	
Alcohols	76,462	
Basic chemicals and products, n.e.c.	34,977	
Gasoline	21,829	
Kerosene	10,401	
Distillate fuel oil	49,399	
Residual fuel oil	43,448	
Lubricating oils and greases	196,415	
Naphtha, petroleum solvents	11,693	
Asphalt, tar and pitches	97,350	
Coke, petroleum coke	17,665	
Other petroleum and coal products	35,361	
Ferroalloys	32,527	
Iron and steel products	2,980	
Machinery, except electrical	8,591	
Iron and steel scrap	99,180	
Miscellaneous	21,073	
GRAND TOTAL	4,819,088	

Apalachicola, Chattahoochee and Flint Rivers

SECTION: The Apalachicola River from Apalachicola Bay to the confluence of the Chattahoochee and Flint Rivers, the Chattahoochee River to Columbus, Georgia (268 miles), and the Flint River to Bainbridge, Georgia (29 miles) - Total: 297 miles

* Gulf Intracoastal Waterway through-traffic over lower 6 miles of the Apalachicola River is excluded

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	898,087	97,957,858
1972	1,025,275	108,210,390
1973	1,024,890	124,189.253
1974	951,026	103,370,745
1975	811,862	85,902,387
1976	1,030,399	106,807,621
1977	1,070,165	135,546,345
1978	873,353	102,994,535
1979	889,884	97,187,372

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons
Soybeans	42,854
Sand, gravel, crushed rock	375,895
Crude tar, oil, gas products	15,795
Benzene and toluene	16,388
Basic chemicals and products, n.e.c.	67,150
Fertilizer and fertilizer materials	136,224
Miscellaneous chemical products	15,103
Gasoline	65,123
Distillate fuel oil	33,585
Lubricating oils and greases	3,977
Naphtha, petroleum solvents	28,706
Asphalt, tar and pitches	81,295
Miscellaneous	7,789
GRAND TOTAL	889,884

Atlantic Intracoastal Waterway

SECTION: From Norfolk, Virginia, to St. Johns River at Jacksonville, Florida - 739 miles

CONTROLLING DEPTH: 12 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	3,662,166	570,922,609
1972	4,361,217	691,882,360
1973	3,931,592	581,126,564
1974	3,537,217	531,899,709
1975	3,218,552	474,560,638
1976	4,470,292	589,392,930
1977	4,803,739	616,303,126
1978	5,094,836	569,411,311
1979	5,066,145	593,329,628

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons	
	Oceangoing	Inland Waterway
Grain and grain products	--	129,186
Soybeans	--	57,520
Fresh fish, except shellfish	--	6,233
Shellfish, except prepared	--	34,286
Menhaden	--	81,258
Iron ore and concentrates	--	724,913
Nonferrous ores, concentrates, n.e.c.	--	38,577
Sand, gravel, crushed rock	--	208,593
Clay and structural clay products	1,200	540
Sulphur, liquid	--	545,684
Animal oils and fats, n.e.c.	--	22,000
Miscellaneous food products	--	19,615
Basic textile products	--	2,154
Pulpwood, log	--	547,362
Wood chips, staves, moldings	--	71,106
Pulp	--	128,767
Paper and paperboard	--	63,314
Sodium hydroxide	--	51,100
Fertilizer and fertilizer materials	--	773,288
Gasoline	17,014	38,266
Jet fuel	--	286,992
Kerosene	--	7,395
Distillate fuel oil	3,593	49,906
Coke, petroleum coke	--	16,613
Residual fuel oil	--	770,474
Naphtha, petroleum solvents	--	39,561

(Continued)

Commodity	Net Tons Oceangoing	Inland Waterway
Iron and steel products	--	122,760
Aluminum and alloys, unworked	--	--
Fabricated metal products	7,215	8,117
Machinery, except electrical	347	4,100
Electrical machinery and equipment	1,725	1,697
Motor vehicles, parts, equipment	--	1,554
Aircraft and parts	10	64
Commodities, n.e.c.	15	70,842
Ships and boats	--	153
Iron and steel scrap	2,084	50,667
Miscellaneous	11,742	46,543
GRAND TOTAL	44,945	5,021,200

Atlantic Intracoastal Waterway

SECTION: From St. Johns River at Jacksonville to Miami, Florida - 349 miles

CONTROLLING DEPTHS: 10 to 12 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	869,289	25,217,290
1972	837,852	64,067,389
1973	1,182,475	44,880,349
1974	1,505,534	33,208,570
1975	1,228,098	24,462,086
1976	1,393,370	29,540,456
1977	1,269,218	36,537,889
1978	1,187,362	18,429,315
1979	1,475,654	29,523,137

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons	
	Oceangoing	Inland Waterway
Fresh fish, except shellfish	--	3,573
Shellfish, except prepared	--	654
Ice	--	2,562
Gasoline	17,014	1,182
Distillate fuel oil	4,774	5,101
Residual fuel oil	3,295	1,360,854
Asphalt, tar and pitches	7,272	--
Liquefied gases	10,177	--
Miscellaneous nonmetallic mineral products	--	38,815
Iron and steel products	300	1,100
Fabricated metal products	100	2,606
Machinery, except electrical	3,227	4,570
Electrical machinery and equipment	1,725	1,455
Commodities, n.e.c.	--	2,463
Miscellaneous	1,210	1,625
GRAND TOTAL	49,094	1,426,560

Black Warrior, Warrior and Tombigbee River System

SECTION: From mouth of Chickasaw Creek to mile 427 on Mulberry Fork, mile 427.6 on Sipsey Fork, and mile 407 on Locust Fork of the Black Warrior River

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	14,101,223	3,728,750,287
1974	15,548,253	4,247,424,309
1975	12,797,822	3,267,425,580
1976	14,705,635	4,403,614,065
1977	15,287,119	4,531,485,349
1978	14,600,815	3,971,917,496
1979	15,311,328	4,403,501,022

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons Inland Waterway
Grain	11,131
Soybeans	209,821
Marine shells, unmanufactured	305,269
Iron ore and concentrates	3,085,961
Manganese ores, concentrates	37,951
Coal and lignite	7,044,460
Crude petroleum	582,826
Limestone	610,200
Sand, gravel, crushed rock	1,156,522
Clay and structural clay products	132,115
Nonmetallic minerals, n.e.c.	136,147
Logs	133,505
Pulpwood, log	208,909
Wood chips, staves, moldings	145,999
Sodium hydroxide	240,258
Alcohols	19,838
Crude tar, oil, gas products	26,867
Benzene and toluene	12,694
Sulphuric acid	26,708
Basic chemicals and products, n.e.c.	100,326
Fertilizers and fertilizer materials	64,325
Gasoline	19,900
Distillate fuel oil	31,175
Residual fuel oil	436,460
Lubricating oils and greases	14,072
Naphtha, petroleum solvents	26,260
Asphalt, tar and pitches	46,846
Other petroleum products	6,958
Iron and steel products	126,050
Machinery, except electrical	12,192
Pig iron	6,606
Fabricated metal products	2,060
Ferroalloys	21,265
Iron and steel scrap	225,768
Miscellaneous	43,884
GRAND TOTAL	15,311,328

Calumet-Sag Channel

SECTION: From junction at Chicago Sanitary and Ship Canal to Blue Island, Illinois - 24 miles

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	6,111,949	135,161,957
1974	6,983,482	155,253,669
1975	7,126,396	157,743,811
1976	6,466,901	141,937,480
1977	6,343,439	140,724,724
1978	6,034,231	137,123,896
1979	5,830,427	133,015,697

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons	
	Coastwise and Lakewise	Inland Waterway
Grain and grain products	--	196,360
Soybeans	--	40,159
Iron ore and concentrates	--	1,000
Aluminum ores and concentrates	--	54,387
Manganese ore and concentrates	--	31,730
Nonferrous ores, concentrates, n.e.c.	--	16,957
Coal and lignite	--	122,846
Sand, gravel, crushed rock	--	34,937
Nonmetallic minerals, n.e.c.	--	138,417
Tallow, animal fats and oils	--	51,832
Prepared animal feeds	--	287,599
Molasses	--	33,364
Sodium hydroxide	--	48,720
Crude tar, oil, gas products	--	4,017
Alcohols	1,326	5,466
Benzene and toluene	--	22,217
Basic chemicals and products, n.e.c.	126,658	356,757
Fertilizer and fertilizer materials	43,073	231,447
Gasoline	18,347	32,268
Kerosene	6,963	10,151
Distillate fuel oil	129,118	46,166
Residual fuel oil	300,022	321,461
Lubricating oils and greases	--	37,570
Naphtha, petroleum solvents	31,438	198,998
Coke, petroleum coke	--	768,972
Building cement	--	1,600
Lime	--	154,077
Slag	--	69,469

(Continued)

Commodity	Net Tons Coastwise and Lakewise	Net Tons Inland Waterway
Iron and steel products	5,319	1,265,753
Lead and zinc, unworked	--	15,842
Ferroalloys	--	214,632
Fabricated metal products	5,300	4,996
Iron and steel scrap	11,216	236,121
Miscellaneous	8,440	86,919
GRAND TOTAL	687,220	5,143,207

Chesapeake Bay

SECTION: From Baltimore, Maryland, to the Capes of Virginia - 200 miles

TOTAL ANNUAL DOMESTIC TRAFFIC

Year	Net Tons	Ton-Miles
1971	25,386,658	2,370,548,397
1972	26,211,332	2,369,353,925
1973	29,569,692	2,756,580,316
1974	30,000,983	2,647,719,258
1975	26,820,368	2,312,096,563
1976	26,443,040	2,427,968,892
1977	23,549,560	1,984,596,243
1978	20,966,291	1,616,151,041
1979	20,404,507	1,599,211,051

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons
Shellfish, except prepared	793,420
Coal and lignite	1,857,093
Crude petroleum	281,152
Sand, gravel, crushed rock	352,637
Wood chips, staves, moldings	251,018
Gasoline	1,780,881
Jet fuel	503,340
Kerosene	102,784
Distillate fuel oil	2,265,038
Residual fuel oil	6,788,230
Lubricating oils and greases	57,189
Naphtha, petroleum solvents	46,356
Asphalt, tar and pitches	1,185,506
Coke, petroleum coke	16,613

(Continued)

Commodity	Net Tons
Liquefied gases	200
Asphalt building materials	967
Petroleum and coal products, n.e.c.	153,118
Building cement	444,243
All other commerce	3,524,722
GRAND TOTAL	20,404,507

Columbia River

SECTION: From the International boundary, south to the mouth of the Snake River, and westerly between Oregon and Washington to the mouth of the Columbia River at the Pacific Ocean - 745 miles (navigation mileage - 340)

CONTROLLING DEPTHS: 4 to 40 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	25,829,472	2,154,224,739
1972	31,341,190	2,688,814,828
1973	34,413,507	3,165,990,692
1974	39,149,042	3,231,365,552
1975	38,121,549	3,194,430,506
1976	41,960,981	3,630,340,960
1977	38,541,767	4,522,164,844
1978	43,724,801	4,266,839,820
1979	47,059,070	4,588,616,135

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons		
	Oceangoing	Inland Waterway	Total
Grain and grain products	10,511,508	4,393,811	14,905,319
Iron ore and concentrates	228,758	--	228,758
Aluminum ore, concentrates	1,269,657	--	1,269,657
Crude petroleum	453,111	--	453,111
Limestone	105,480	--	105,480
Sand, gravel, crushed rock	1,122,463	1,610,878	2,733,341
Clay and structural clay products	213,375	29,130	242,505
Fertilizer and fertilizer materials	244,603	83,879	328,482
Salt	451,847	--	451,847
Vegetables and preparations, n.e.c.	53,525	7,047	60,572
Molasses	29,121	3,718	32,839
Veg. oils, margarine, shortening	70,567	148	70,715

(Continued)

Net Tons

Commodity	Oceangoing	Inland Waterway	Total
Logs	3,842,475	59,020	3,901,495
Rafted logs	3,021	5,866,822	5,869,843
Fuel wood, charcoal, wastes	110	181,605	181,715
Timber, posts, poles, piling	12,453	7,183	19,636
Wood chips, staves, moldings	1,922,468	809,486	2,731,954
Lumber	499,125	9,530	508,655
Veneer, plywood, worked wood	188,992	9,046	198,038
Pulp	71,220	249,578	320,798
Paper and paperboard	255,876	33,492	289,368
Pulp and paper products, n.e.c.	11,983	957,289	969,272
Basic chem. and products, n.e.c.	875,147	226,572	1,101,719
Gasoline	1,089,655	761,013	1,850,668
Jet fuel	69,627	33,183	102,810
Kerosene	77,193	--	77,193
Distillate fuel oil	1,549,378	931,019	2,480,397
Residual fuel oil	1,717,897	596,645	2,314,542
Lubricating oils and greases	136,804	1,579	138,383
Asphalt, tar and pitches	456,391	25,183	481,574
Other petroleum and coal products	20,368	--	20,368
Iron and steel products	487,815	125	487,940
Fabricated metal products	63,876	29,723	93,599
Machinery, except electrical	58,888	3,860	62,748
Motor vehicles, parts, equipment	327,971	--	327,971
Iron and steel scrap	317,146	25	317,171
Waste and scrap, n.e.c.	--	367,551	367,551
Miscellaneous	847,380	113,656	961,036
GRAND TOTAL	29,657,274	17,401,796	47,059,070

Cumberland River

SECTION: From the mouth near Smithland, Kentucky, at its junction with the Ohio River to Celina, Tennessee, mile 381, present head of through navigation

CONTROLLING DEPTHS: 8 to 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	5,792,355	677,311,139
1972	8,251,271	882,020,973
1973	10,813,213	1,054,753,548
1974	11,034,025	982,502,698
1975	11,860,145	1,098,589,441
1976	11,318,873	1,085,375,760
1977	12,761,169	1,125,392,878
1978	12,396,898	989,424,876
1979	15,162,573	1,212,783,090

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons
Grain and grain products	59,209
Soybeans	69,042
Coal and lignite	6,853,996
Limestone	192,514
Nonmetallic minerals, n.e.c.	4,484,991
Sugar	6,687
Crude tar, oil, gas products	80,889
Alcohols	27,778
Sulphuric acid	57,580
Basic chemicals and products, n.e.c.	150,114
Gasoline	265,093
Jet fuel	20,974
Distillate fuel oil	114,383
Residual fuel oil	41,442
Lubricating oils and greases	13,171
Asphalt, tar and pitches	212,141
Naphtha, petroleum solvents	12,628
Building cement	119,781
Lime	57,600
Slag	14,698
Iron and steel products	333,560
Machinery, except electrical	14,125
Iron and steel scrap	103,568
Waterway improvement material	1,757,657
Miscellaneous	98,952
GRAND TOTAL	15,162,573

Delaware River

SECTION: From Trenton, New Jersey, to Deepwater Point at mouth of Delaware Bay - 127 miles

CONTROLLING DEPTHS: 11.3 to 39 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	123,543,497	9,793,833,154
1972	127,207,307	9,635,344,851
1973	139,297,118	10,744,205,966
1974	143,673,501	11,437,006,814
1975	131,819,164	10,446,605,935
1976	133,696,091	10,431,934,520
1977	133,276,227	10,215,907,280
1978	132,438,907	10,234,279,723
1979	140,463,460	10,853,421,444

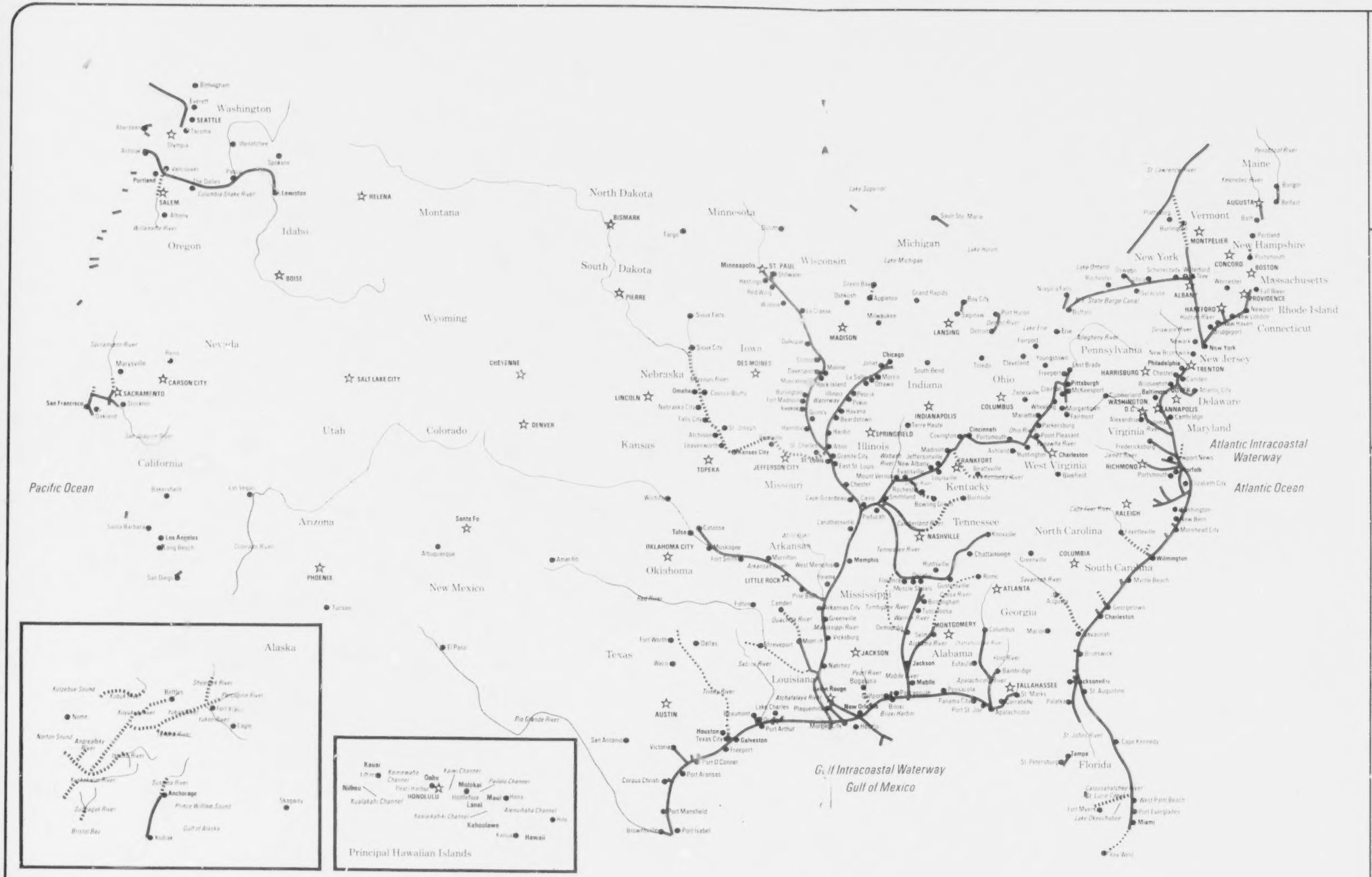
PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons		
	Oceangoing	Inland Waterway	Total
Grain and grain products	2,565,821	--	2,565,821
Soybeans	584,455	--	584,455
Fresh fruit and nuts	156,922	--	156,922
Cocoa beans	69,614	--	69,614
Iron ore and concentrates	6,759,846	38,629	6,798,475
Aluminum ores and concentrates	58,937	--	58,937
Nonferrous ores, concentrates, n.e.c.	88,482	21,636	110,118
Coal and lignite	1,137,288	844,945	1,982,233
Crude petroleum	59,234,672	12,317,630	71,552,302
Limestone	1,048,735	--	1,048,735
Sand, gravel, crushed rock	46,547	--	46,547
Clay and structural clay	89,584	--	89,584
Fertilizer and fertilizer materials	78,935	21,570	100,505
Sulphur, dry and liquid	41,576	--	41,576
Nonmetallic minerals and salt, n.e.c.	82,425	--	82,425
Meat, fresh, chilled, frozen	158,346	--	158,346
Sugar	950,683	--	950,683
Molasses	15,912	3,435	19,347
Misc. food products	108,452	--	108,452

(Continued)

Commodity	Net Tons Oceangoing	Inland Waterway	Total
Basic textile products	44,497	--	44,497
Lumber	404,135	--	404,135
Veneer, plywood, worked wood	168,964	--	168,964
Pulp	13,849	109,371	123,220
Paper and paperboard	83,126	--	83,126
Sodium hydroxide	180,609	--	180,609
Crude tar, oil, gas products	56,991	1,506	58,497
Alcohols	97,373	--	97,373
Benzene and toluene	120,668	132,494	253,162
Sulphuric acid	79,313	445,973	525,286
Basic chemicals and products, n.e.c.	772,779	365,202	1,137,981
Plastic materials	63,599	--	63,599
Misc. chemical products	48,504	--	48,504
Gasoline	7,043,856	2,192,078	9,235,934
Jet Fuel	505,027	707,493	1,212,520
Kerosene	209,432	161,351	370,783
Distillate fuel oil	6,813,631	3,610,734	10,424,365
Residual fuel oil	10,347,880	9,183,336	19,531,216
Lubricating oils and greases	1,405,909	138,220	1,544,129
Naphtha, petroleum solvents	411,475	124,517	535,992
Asphalt, tar and pitches	844,497	309,759	1,154,256
Other petroleum and coal products	1,898,976	60,808	1,959,784
Glass and glass products	54,725	--	54,725
Building cement	141,377	--	141,377
Pig iron	206	--	206
Iron and steel products	1,506,645	20,233	1,526,878
Lead and zinc, unworked	46,593	--	46,593
Fabricated metal products	105,766	741	106,507
Machinery, except electrical	133,532	3,140	136,672
Motor vehicles, parts, equip.	447,730	5	447,735
Iron and steel scrap	707,199	4,050	711,249
Nonferrous metal scrap	81,796	--	81,796
Waste and scrap, n.e.c.	--	248,490	248,490
Commodities, n.e.c.	338,425	116,301	454,726
Miscellaneous	789,143	34,354	823,497
GRAND TOTAL	109,245,459	31,218,001	140,463,460

Waterways of the United States



CONTROLLING DEPTHS

9 FEET OR MORE

UNDER 9 FEET

AUTHORIZED EXTENSIONS

PUBLISHED 1981 BY
THE AMERICAN WATERWAYS OPERATORS, INC.
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Compiled from information supplied by
CORPS OF ENGINEERS, U.S. ARMY

NAVIGABLE LENGTHS AND DEPTHS[1] OF UNITED STATES WATERWAY ROUTES

LENGTH IN MILES OF WATERWAYS

GROUP	UNDER 6 FT.	6 TO 9FT.	9 TO 12 FT.	12 TO 14 FT.	14 FT. AND OVER	TOTAL
Atlantic Coast Waterways (exclusive of Atlantic Intracoastal Waterway from Norfolk, Va. to Key West, Fla.), but including New York State Barge Canal System	1,426 1,482	1,741 1,485	584 589	938 965	1,581 1,544	5,768 6,030
Atlantic Intracoastal Waterway from Norfolk, Va. to Key West, Fla.	—	65 160	65 65	1,104 1,104	—	1,234 1,329
Gulf Coast Waterways (exclusive of Gulf Intracoastal Waterway from St. Marks River, Fla. to Mexican Border)	2,055 2,174	647 812	1,135 2,095	79 269	378 388	4,292 5,738
Gulf Intracoastal Waterway from St. Marks River, Fla. to Mexican Border (including Port Allen-Morgan City Alternate Route)	— —	— —	— —	1,137 1,180	— —	1,137 1,180
Mississippi River System	2,020 4,365	969 1,457	4,957 5,062	740 755	268 268	8,954 11,907
Pacific Coast Waterways	597 700	498 515	737 737	26 27	2,367 825	3,825 2,554
Great Lakes	45 100	89 148	— 14	8 8	348 369	490 639
All Other Waterways (exclusive of Alaska)	76 76	7 7	— —	1 1	7 7	91 91
GRAND TOTAL	6,352 8,935	3,516 4,544	6,978 8,062	4,031 4,309	4,666 3,368	25,543 29,218

[1] The mileages shown in this table in bold type represent the lengths of all navigable channels of the United States including those improved by the Federal Government, other agencies, and those which have not been improved but are usable for commercial navigation.

The mileages shown in this table in light type represent the lengths authorized for improvement by the Congress of the United States in legislation known as Rivers and Harbors Acts.

The sources for these tabulations are publications of the Corps of Engineers, United States Army.

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Green and Barren Rivers

SECTION: Green River - From near Evansville, Indiana, at the Green River's confluence with the Ohio River, to mouth of Barren River - 149.5 miles. Barren River - From junction with Green River at Woodbury, Kentucky, to Bowling Green, Kentucky - 30 miles

CONTROLLING DEPTHS: 5 1/2 to 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	14,610,917	1,348,165,401
1972	16,245,729	1,467,228,335
1973	15,517,337	1,395,537,021
1974	15,639,721	1,426,247,039
1975	15,893,645	1,439,134,454
1976	13,781,231	1,203,359,390
1977	13,501,167	1,154,759,525
1978	10,080,475	812,870,554
1979	10,806,466	856,038,878

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons
Grain	117,842
Soybeans	65,171
Aluminum ores and concentrates	73,832
Coal and lignite	10,284,309
Basic chemicals and products, n.e.c.	221,162
Coke, petroleum coke	36,576
Miscellaneous	7,574
GRAND TOTAL	10,806,466

Gulf Intracoastal Waterway

SECTION: From Apalachee Bay (St. Marks), Florida, to Brownsville, Texas - 1108.9 miles

Alternate Route: Morgan City, Louisiana, to Port Allen, Louisiana - 64.1 miles

CONTROLLING DEPTH: 10-12 feet

TOTAL ANNUAL TRAFFIC

	Main Route		Alternate Route	
Year	Net Tons	Ton-Miles	Net Tons	Ton-Miles
1971	105,975,450	17,767,478,670	14,368,939	854,221,099
1972	108,999,010	17,879,308,331	19,173,890	1,156,297,016
1973	100,767,257	16,578,104,685	14,269,832	871,055,019
1974	103,076,1421	17,078,855,710	15,895,856	970,581,229
1975	96,950,849	15,594,606,116	17,083,459	1,049,516,733
1976	99,085,379	16,511,685,908	18,961,414	1,160,488,912
1977	104,934,179	18,227,332,044	18,456,491	1,131,951,427
1978	102,332,582	17,506,122,885	18,066,503	1,059,821,031
1979	97,272,038	17,286,322,092	20,254,735	1,258,236,102

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons Oceangoing	Inland Waterway	Alternate Route
Grain and grain products	29,204	675,599	39,530
Soybeans	--	640,354	193,178
Marine shells, unmanufactured	--	5,603,184	143,621
Iron ore and concentrates	--	80,058	5,972
Aluminum ore, concentrates	--	103,505	75,427
Manganese ores and concentrates	--	88,867	41,761
Nonferrous ores and concentrates	--	129,895	59,536
Coal and lignite	--	4,971,498	423,071
Crude petroleum	--	20,000,175	1,048,424
Limestone	--	612,295	--
Sand, gravel, crushed rock	--	2,356,234	188,839
Clay and structural clay products	--	1,045,292	41,766
Sulphur, dry and liquid	--	564,958	36,123
Prepared animal feeds	1,301	85,394	46,063
Nonmetallic minerals including salt, n.e.c.	63,282	4,260,727	2,521,301
Sugar	--	89,764	44,168
Molasses	--	38,121	30,250
Tallow, animal oils and fats, n.e.c.	--	53,799	7,415
Pulpwood, log	--	145,715	--
Pulp	--	50,172	--
Paper and paperboard	--	108,804	--
Sodium hydroxide	91,292	1,944,838	400,215
Crude tar, oil, gas products	--	909,643	360,542

(Continued)

Commodity	Oceangoing	Net Tons Inland Waterway	Alternate Route
Alcohols	--	1,501,978	797,589
Benzene and toluene	--	1,927,659	366,306
Sulphuric acid	--	407,912	42,333
Basic chemicals and products, n.e.c.	--	7,993,038	4,049,018
Plastic materials	--	127,832	74,601
Synthetic rubber	--	60,001	3,234
Fertilizer and fertilizer materials	316,671	1,554,353	469,063
Miscellaneous chemical products	--	145,704	100,423
Gasoline	17,014	7,060,127	1,600,125
Jet fuel	--	650,806	33,947
Kerosene	--	527,668	47,420
Distillate fuel oil	7,139	4,234,066	658,117
Residual fuel oil	12,030	12,679,404	2,580,651
Lubricating oils and greases	--	1,669,289	788,497
Naphtha, petroleum solvents	--	2,940,666	721,893
Asphalt, tar and pitches	17,699	471,535	70,164
Coke, petroleum coke	--	805,398	202,163
Liquefied gases	27,547	366,353	165,252
Other petroleum and coal products	--	271,416	47,338
Building cement	7,903	524,215	37,495
Misc. nonmetallic mineral products	--	310,257	--
Slag	5,450	13,343	5,963
Iron and steel products	17,571	1,865,193	881,940
Ferroalloys	--	92,497	40,780
Lead and zinc, unworked	--	30,457	19,954
Aluminum and alloys, unworked	--	19,737	12,439
Fabricated metal products	1,860	38,460	7,998
Machinery, except electrical	5,094	63,305	12,879
Electrical machinery and equipment	1,760	81,358	67,961
Ships and boats	157	2,540	240
Miscellaneous manufactured products	--	452,932	294
Iron and steel scrap	1,399	976,596	491,938
Waste and scrap, n.e.c.	--	956,433	105,213
Water	--	834,339	--
Waterway improvement materials	--	56,500	9,050
Commodities, n.e.c.	--	75,873	--
Miscellaneous	1,290	298,244	35,255
GRAND TOTAL	625,663	96,646,375	20,254,735

Houston Ship Canal

SECTION: From Galveston Harbor, Texas, through San Jacinto River and Buffalo Bayou to Turning Basin at Houston, Texas - 52 miles

CONTROLLING DEPTHS: 6 to 37 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	68,423,829	2,865,468,463
1972	71,430,789	2,948,312,107
1973	88,517,992	3,741,921,450
1974	89,106,389	3,767,066,327
1975	83,674,039	3,550,923,871
1976	89,897,598	3,834,608,638
1977	104,291,267	3,285,460,564
1978	111,936,099	4,862,244,510
1979	117,550,908	5,103,845,724

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons	
	Oceangoing	Inland Waterway
Alcoholic beverages	76,666	--
Cotton	170,857	--
Grain and grain products	14,724,862	153,710
Oilseeds, n.e.c.	16,375	1,601
Soybeans	131,263	12,178
Coffee	90,031	821
Marine shells, unmanufactured	--	565,913
Iron ore and concentrates	1,172,959	7,040
Manganese ore, concentrates	--	4,921
Coal and lignite	2,577	392,052
Crude petroleum	32,389,585	2,873,790
Limestone	203,066	--
Sand, gravel, crushed rock	22,765	1,245,512
Clay and structural clay products	1,570,211	289,988
Sulphur, dry and liquid	2,109	304,298
Nonmetallic minerals, n.e.c.	92,181	90,595
Tallow, animal fats and oils	291,477	--
Animal by-products, n.e.c.	69,059	--
Molasses	286,383	25,269
Vegetable oils, margarine, shortening	222,227	6,324
Sodium hydroxide	315,188	562,817
Crude tar, oil, gas products	235,686	500,052
Alcohols	417,391	802,579
Benzene and toluene	141,907	1,128,579
Sulphuric acid	--	630,606
Basic chemicals and products, n.e.c	3,400,030	3,374,830
Plastic materials	604,122	11,861
Synthetic rubber	98,914	6,619
Fertilizer and fertilizer materials	2,419,757	570,312
Miscellaneous chemical products	469,817	52,096
Gasoline	4,700,858	1,399,165
Jet fuel	705,134	163,533
Kerosene	296,834	160,520
Distillate fuel oil	4,760,985	2,110,525
Residual fuel oil	5,394,704	7,915,624

(Continued)

Commodity	Oceangoing	Inland Waterway
Lubricating oils and greases	2,493,769	705,271
Naphtha, petroleum solvents	811,154	2,053,096
Asphalt, tar, and pitches	9,411	216,870
Coke, petroleum coke	129,403	81,249
Liquefied gases	768,519	62,704
Other petroleum and coal products	93,435	122,744
Rubber and misc. plastic products	66,176	--
Building cement	419,217	98,448
Iron and steel products	3,015,378	1,131,878
Fabricated metal products	270,085	19,708
Machinery, except electrical	493,166	16,091
Motor vehicles, parts, equipment	302,284	4,953
Iron and steel scrap	118,150	473,972
Waste and scrap, n.e.c.	--	1,250,892
Commodities, n.e.c.	197,550	32,196
Miscellaneous	1,090,379	143,050
GRAND TOTAL	84,679,269	31,776,852

Hudson River

SECTION: From deepwater in Upper Bay, New York, to Waterford, New York - 155 miles

CONTROLLING DEPTHS: 12 to 27 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	40,952,909	2,461,659,464
1974	38,479,579	2,260,669,818
1975	34,135,648	1,959,202,309
1976	28,308,347	1,923,483,312
1977	28,220,192	1,939,792,560
1978	30,080,559	2,035,919,276
1979	28,519,840	1,904,117,775

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons		
	Oceangoing	Inland Waterways	Total
Grain and grain products	847,202	--	847,202
Fresh fruit and nuts	170,536	--	170,536
Coffee	47,874	67,023	114,897
Crude petroleum	571.027	224,597	795,624
Limestone	693,657	--	693,657
Sand, gravel and crushed rock	665,848	4,344,125	5,009,973
Meat, fresh, chilled, frozen	93,592	--	93,592
Sugar	261,624	--	261,624
Molasses	119,965	2,839	122,804
Alcoholic beverages	142,511	--	142,511
Veg. oils, margarine, shortening	15,567	87,621	103,188
Miscellaneous food products	66,878	--	66,878
Basic textile products	38,058	--	38,058
Tallow, animal fats and oils	6,344	13,560	19,904
Pulp	25,523	--	25,523
Paper and paperboard	61,754	--	61,754
Sodium hydroxide	958	15,665	16,623
Crude tar, oil, gas products	153	--	153
Basic chemicals and products, n.e.c.	84,317	297	84,614
Plastic materials	103,759	-	103,759
Miscellaneous chemical products	30,155	--	30,155
Gasoline	597,637	3,226,284	3,823,921
Jet fuel	19,612	179,660	199,272
Kerosene	31,127	213,438	244,565
Distillate fuel oil	861,260	3,584,404	4,445,664
Residual fuel oil	3,708,091	2,817,425	6,525,516
Asphalt, tar and pitches	205,234	136,215	341,449
Other petroleum and coal products	102,010	108,139	210,149
Building cement	1,276,146	234,819	1,510,965
Iron and steel products	51,579	--	51,579
Clay and structural clay products	63,558	--	63,558
Copper alloys, unworked	14,539	19,219	33,758
Fabricated metal products	64,730	--	64,730
Machinery, except electrical	85,978	2	85,980
Electrical machinery and equipment	76,675	2	76,677
Motor vehicles, parts and equipment	69,972	--	69,972
Miscellaneous manufactured products	44,697	--	44,697
Iron and steel scrap	252,642	90,715	343,357
Waste and scrap, n.e.c.	--	768,679	768,679
Miscellaneous	812,022	301	812,323
GRAND TOTAL	12,384,811	16,135,029	28,519,840

New York State Barge Canal

SECTION: From Tonawanda, New York, to Whitehall, New York, including the Erie, Oswego, Cayuga, Seneca and Champlain Canals - 522 miles

CONTROLLING DEPTHS: 12 to 14 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	2,548,113	246,839,392
1974	2,222,827	215,430,282
1975	1,940,772	180,725,089
1976	2,227,052	193,092,844
1977	1,826,878	166,635,083
1978	1,553,310	146,240,967
1979	1,303,337	119,115,618

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons
Sand, gravel, crushed rock	14,170
Molasses	4,446
Alcohols	15,116
Gasoline	284,423
Jet fuel	114,699
Kerosene	39,716
Distillate fuel oil	367,987
Residual fuel oil	296,526
Lubricating oils and greases	7,830
Asphalt, tar and pitches	83,057
Building cement	72,957
Machinery, except electrical	2,400
Miscellaneous	10
GRAND TOTAL	1,303,337

Illinois Waterway

SECTION: From Illinois River at Grafton, Illinois, to Turning Basin No. 5 on Calumet River (includes Calumet-Sag Channel) - 353.6 miles

CONTROLLING DEPTHS: 9 to 12 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	38,324,867	7,312,185,374
1972	43,970,391	8,350,419,627
1973	44,510,478	8,450,727,892
1974	45,301,607	8,825,841,497
1975	47,242,597	8,992,017,443
1976	46,853,608	8,988,507,803
1977	44,516,298	8,518,085,320
1978	41,609,086	7,683,852,338
1979	39,339,385	7,462,048,381

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons	
	Coastwise and Lakewise	Inland Waterway
Grain and grain products	23,267	10,889,211
Soybeans	--	2,034,543
Prepared animal feeds	--	627,165
Aluminum ores and concentrates	--	54,387
Nonferrous ores and concentrates, n.e.c.	--	28,568
Coal and lignite	--	4,469,441
Crude petroleum	--	114,956
Sand, gravel, crushed rock	--	3,555,808
Fertilizer and fertilizer materials	55,216	1,489,643
Sulphur, dry and liquid	--	24,146
Nonmetallic minerals, n.e.c.	--	920,144
Tallow, animal fats and oils	--	85,386
Sugar	--	266,448
Molasses	--	48,657
Vegetable oils, margarine, shortenings	--	71,202
Veneer, plywood, worked wood	--	24,977
Pulp	--	35,220
Sodium hydroxide	--	306,778
Crude tar, oil, gas products	--	76,984
Alcohols	7,043	268,623
Benzene and toluene	--	119,493
Sulphuric acid	--	49,159
Basic chemicals and products	289,579	1,731,621
Gasoline	102,407	1,116,187
Jet fuel	--	47,872
Distillate fuel oil	242,820	971,446
Residual fuel oil	667,015	1,937,073
Lubricating oils and greases	--	375,026
Naphtha, petroleum solvents	35,976	725,695
Asphalt, tar and pitches	23,881	272,368
Coke and petroleum coke	--	1,261,994
Other petroleum and coal products	9,313	35,701
Building cement	--	513,590
Lime	--	170,614
Slag	--	105,448
Iron and steel products	5,319	1,727,878
Ferroalloys	--	221,901
Lead and zinc, unworked	--	22,977
Fabricated metal products	5,300	24,291
Iron and steel scrap	11,216	499,219
Waste and scrap, n.e.c.	--	248,770
Miscellaneous	1000	188,978
GRAND TOTAL	1,479,352	37,759,588

James River

Section: From Richmond, VA, to Hampton Roads at Newport News, VA - 89 miles

Controlling Depths: 11.0 to 25 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1970	7,301,413	435,709,182
1971	8,551,305	526,683,591
1972	6,554,555	408,542,427
1973	7,805,992	482,358,804
1974	7,714,515	471,973,029
1975	5,566,000	361,115,892
1976	6,192,395	396,102,080
1977	6,714,097	412,434,993
1978	7,819,573	457,071,325
1979	7,918,482	481,495,348

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons Oceangoing	Net Tons Inland Waterway	Total
Tobacco, leaf	44,815	--	44,815
Shellfish, except prepared	--	19,147	19,147
Sand, gravel, crushed rock	3,016	4,864,460	4,867,476
Sulphur, liquid	27,504	23,184	50,688
Nonmetallic minerals, n.e.c.	3,891	--	3,891
Tobacco manufactures	8,458	--	8,458
Basic textile products	8,075	--	8,075
Paper and paperboard	14,129	--	14,129
Crude tar, oil, gas products	--	2,006	2,006
Basic chemicals and products, n.e.c.	22,318	188,957	211,275
Plastic materials	15,871	--	15,871
Nitrogenous chemical fertilizers	476,444	232,692	709,136
Gasoline	--	326,225	326,225
Kerosene	--	26,970	26,970
Distillate fuel oil	--	271,577	271,577
Residual fuel oil	--	1,083,771	1,083,771
Asphalt, tar and pitches	71,118	29,329	100,447
Petroleum and coal products, n.e.c.	490	33,396	33,886

Commodity	Oceangoing	Net Tons Inland Waterway	Total
Machinery, except electrical	1,874	528	2,402
Electrical machinery and equipment	2,737	1,174	3,911
Iron and steel scrap	84,586	1,350	85,936
Miscellaneous	26,334	2,056	28,390
GRAND TOTAL	811,660	7,106,822	7,918,482

Kanawha River

SECTION: Deepwater, West Virginia, to the Kanawha River's confluence with the Ohio River at Point Pleasant, West Virginia - 91 miles

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	14,169,337	796,234,247
1974	12,781,026	713,681,050
1975	12,449,424	657,277,327
1976	12,250,362	662,228,354
1977	10,755,599	562,178,431
1978	10,992,616	601,519,584
1979	13,776,446	783,939,496

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons
Manganese ores and concentrates	55,256
Coal and lignite	7,323,004
Limestone	78,712
Sand, gravel, crushed rock	2,191,038
Sulphur, liquid	44,327
Nonmetallic minerals, n.e.c.	103,707
Sodium hydroxide	139,488
Alcohols	461,323
Benzene and toluene	32,180
Sulphuric acid	86,271
Basic chemicals and products, n.e.c.	1,701,626
Miscellaneous chemical products	94,639
Gasoline	784,262
Jet fuel	33,678
Kerosene	15,486
Distillate fuel oil	288,012

(Continued)

Commodity	Net Tons
Lubricating oils and greases	15,502
Naphtha, petroleum solvents	88,235
Coke, petroleum coke	12,544
Other petroleum and coal products	13,228
Building cement	94,345
Iron and steel products	6,326
Iron and steel scrap	40,648
Miscellaneous	72,609
GRAND TOTAL	13,776,446

Kaskaskia River

SECTION: Mouth at Mississippi River to mile 36.2 at Fayetteville, Illinois

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	25,236	--
1974	216,268	--
1975	194,750	--
1976	589,508	14,147,950
1977	1,286,808	31,788,700
1978	1,832,961	42,431,625
1979	1,723,453	42,918,325

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons
Coal and lignite	1,713,203
Waterway improvement material	10,250
GRAND TOTAL	1,723,453

Kentucky River

SECTION: From Carrollton, Kentucky, at the Kentucky River's confluence with the Ohio River, south to the junction of the North and Middle Forks east of Beattyville, Kentucky - 255 miles

CONTROLLING DEPTH: 6 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1973	777,894	52,282,252
1974	652,607	43,237,662
1975	580,481	39,416,325
1976	538,712	35,554,992
1977	465,116	30,266,386
1978	415,521	25,534,459
1979	417,947	26,883,350

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons
Sand, gravel, crushed rock and limestone	416,547
Miscellaneous	1,400
GRAND TOTAL	417,947

McClellan-Kerr Arkansas River Navigation System

SECTION: From confluence of White and Mississippi Rivers to Catoosa, Oklahoma, via White River, Arkansas Post Canal, Arkansas, and Verdigris Rivers - 448 miles

CONTROLLING DEPTH: Minimum - 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1972	5,337,370	520,887,271
1973	4,955,789	338,623,935
1974	6,000,443	451,108,827
1975	5,156,562	430,977,451
1976	6,538,434	778,259,780
1977	9,145,956	1,297,556,979
1978	9,851,932	1,694,929,503
1979	8,411,173	1,472,861,443

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons
Grain and grain products	502,531
Soybeans	618,342
Aluminum ores, concentrates	160,718
Coal and lignite	800,833
Sand, gravel, crushed rock	2,806,418
Fertilizer and fertilizer materials	440,063
Prepared animal feeds	52,602
Molasses	18,366
Logs	19,386
Paper and paperboard	77,749
Pulp and paper products, n.e.c.	39,016
Sodium hydroxide	252,849
Alcohols	6,590
Basic chemicals and products, n.e.c.	291,934
Gasoline	20,544
Distillate fuel oil	176,053
Residual fuel oil	1,399,063
Asphalt, tar and pitches	23,478
Other petroleum and coal products	36,270
Slag	62,920
Iron and steel products	310,351
Fabricated metal products	7,546
Iron and steel scrap	43,043
Waterway improvement materials	102,795
Miscellaneous	141,713
GRAND TOTAL	8,411,173

Minnesota River

SECTION: Mouth to Shakopee, Minnesota - 25.6 miles

CONTROLLING DEPTH: 9 feet to mile 14.7

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	3,626,132	--
1972	4,314,833	--
1973	4,284,012	--
1974	4,778,630	--
1975	3,842,850	--
1976	3,898,291	54,693,553
1977	3,407,261	46,533,312
1978	2,078,067	28,866,981
1979	1,198,086	16,238,965

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons
Grain and grain products	486,647
Soybeans	75,279
Coal and lignite	512,565
Nonmetallic minerals, n.e.c.	7,022
Vegetable oils, margarine, shortening	4,654
Fertilizer and fertilizer materials	80,926
Petroleum products	18,330
Iron and steel products	12,663
GRAND TOTAL	1,198,086

Upper Mississippi River

SECTION: From Minneapolis, Minnesota, to the mouth of the Missouri River - 663 miles

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

	Inland Waterway		Oceangoing	
Year	Net Tons	Ton-Miles	Net Tons	Ton-Miles
1973	57,818,045	10,873,575,077	246,153	5,626,401
1974	61,747,186	11,700,427,879	266,458	7,122,004
1975	63,080,102	11,293,894,600	158,565	8,620,861
1976	68,276,914	11,688,260,904	143,393	8,289,820
1977	67,020,864	11,380,455,846	197,278	13,848,016
1978	68,816,214	12,908,444,194	160,167	12,562,943
1979	68,506,059	13,269,369,817	108,603	2,497,869

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Net Tons

Commodity	Oceangoing	Inland Waterway
Grain and grain products	23,267	27,118,410
Soybeans	--	5,236,962
Oilseeds, n.e.c.	--	36,404
Ores, concentrates, n.e.c.	--	202,603
Coal and lignite	--	7,188,954
Crude petroleum	--	368,264
Limestone	--	74,724
Sand, gravel, crushed rock	--	3,260,965
Sulphur, liquid	--	21,497
Nonmetallic minerals, n.e.c.	--	1,376,213
Tallow, animal fats and oils	--	125,532

(Continued)

Commodity	Net Tons Oceangoing	Net Tons Inland Waterway
Prepared animal feeds	--	1,332,967
Sugar	--	266,448
Molasses	--	205,293
Vegetable oils, margarine, shortening	--	403,242
Sodium hydroxide	--	472,053
Crude tar, oil, gas products	--	73,222
Alcohols	--	289,420
Benzene and toluene	--	152,520
Sulphuric acid	--	29,405
Basic chemicals and products n.e.c.	--	2,012,007
Fertilizer and fertilizer materials	84,087	3,256,963
Gasoline	--	2,718,245
Jet fuel	--	106,029
Distillate fuel oil	--	1,662,652
Residual fuel oil	--	2,222,637
Lubricating oils and greases	--	570,611
Naphtha, petroleum solvents	--	808,224
Asphalt, tar and pitches	--	1,107,856
Coke, petroleum coke	--	1,016,324
Liquefied gases	--	41,415
Other petroleum and coal products	--	33,746
Building cement	--	1,323,213
Lime	--	155,587
Slag	--	133,429
Iron and steel products	1,249	1,776,481
Ferroalloys	--	225,734
Fabricated metal products	--	31,137
Machinery, except electrical	--	36,669
Iron and steel scrap	--	480,945
Waterway improvement material	--	211,830
Miscellaneous	--	339,225
GRAND TOTAL	108,603	68,506,057

Mississippi River

SECTION: From Minneapolis, Minnesota, to the Mouth of Passes - 1,837 miles

CONTROLLING DEPTH: 9 to 40 feet

TOTAL ANNUAL TRAFFIC

Year	Oceangoing	Inland Waterway	Total
	Net Tons		
1972	93,174,371	178,806,043	271,980,414
1973	102,345,760	174,001,136	276,346,896
1974	112,754,958	189,834,656	302,589,614
1975	123,325,607	187,913,877	311,239,484
1976	152,855,495	203,328,232	356,183,727
1977	185,282,919	211,488,297	396,771,216
1978	197,563,541	215,502,119	413,065,660
1979	212,169,751	218,000,928	430,170,679
	Ton-Miles		
1972	14,021,094,636	93,455,455,377	107,476,550,013
1973	15,478,890,445	91,479,128,715	106,958,019,160
1974	17,328,836,147	99,883,317,438	117,212,153,585
1975	19,401,952,194	99,715,863,367	119,117,815,561
1976	24,656,411,741	110,565,437,157	135,220,848,898
1977	29,911,859,876	109,554,793,105	139,466,652,981
1978	32,324,017,168	118,165,016,318	150,489,033,486
1979	34,339,939,056	120,669,619,515	155,009,558,571

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Oceangoing	Inland Waterway	Total
	Net Tons		
Grain and grain products	36,862,660	39,868,457	76,731,117
Soybeans	14,015,711	12,411,786	26,427,497
Oilseeds, n.e.c.	65,670	65,983	131,653
Coffee	221,927	2,587	224,514
Marine shells, unmarufactured	--	1,679,290	1,679,290
Crude rubber and allied gums	192,332	526	192,858
Iron ores and concentrates	915,431	878,144	1,793,575
Aluminum ores and concentrates	7,264,778	442,395	7,707,173
Manganese ores and concentrates	147,576	516,471	664,047
Nonferrous ores, concentrates, n.e.c.	728,686	908,281	1,636,967
Coal and lignite	4,231,531	21,902,357	26,133,888
Crude petroleum	90,831,776	17,065,350	107,897,126
Limestone	284,771	386,119	670,890
Sand, gravel, crushed rock	29,270	9,343,674	9,372,944
Clay and structural clay products	343,377	500,864	844,241
Sulphur, dry and liquid	2,155,383	2,749,124	4,904,507
Nonmetallic minerals, n.e.c.	470,026	4,715,351	5,185,377
Tallow, animal fats and oils	527,096	278,062	805,158
Prepared animal feeds	8,730,748	2,898,101	11,628,849
Sugar	1,437,808	421,482	1,859,290
Molasses	.550,766	498,773	1,049,539
Veg. oils, margarine, shortening	1,445,493	1,180,200	2,625,693

(Continued)

Net Tons

Commodity	Oceangoing	Inland Waterway	Total
Logs	105,340	317,331	422,671
Pulpwood, log	--	53,286	53,286
Lumber	115,973	69,524	185,497
Veneer, plywood, worked wood	109,177	25,573	134,750
Pulp	438,400	257,699	696,099
Paper and paperboard	441,899	287,357	729,256
Sodium hydroxide	345,703	2,564,513	2,910,216
Crude tar, oil, gas products	9,217	796,396	805,613
Alcohols	267,195	1,575,097	1,842,292
Benzene and toluene	34,814	1,292,996	1,327,810
Sulphuric acid	14,513	598,803	613,316
Basic chemicals & products, n.e.c.	3,265,284	11,640,665	14,905,949
Plastic materials	124,122	89,736	213,858
Synthetic rubber	22,653	75,391	98,044
Fertilizer & fertilizer materials	9,777,534	7,150,216	16,927,750
Miscellaneous chemical products	164,516	210,338	374,854
Gasoline	3,533,557	12,529,529	16,063,086
Jet fuel	959,453	951,269	1,910,722
Kerosene	173,480	322,600	496,080
Distillate fuel oil	4,018,103	7,997,149	12,015,252
Residual fuel oil	6,684,726	21,093,957	27,778,683
Lubricating oils & greases	1,312,862	1,896,401	3,209,263
Naphtha, petroleum solvents	247,510	2,389,389	2,636,899
Asphalt, tar and pitches	167,619	1,839,950	2,007,569
Coke, petroleum coke	2,280,201	2,856,990	5,137,191
Liquefied gases	191,560	825,445	1,017,005
Other petroleum & coal products	87,122	204,452	291,574
Building cement	48,512	2,821,022	2,869,534
Lime	177	421,114	421,291
Slag	25,042	246,225	271,267
Iron and Steel products	2,620,200	4,930,923	7,551,123
Copper alloys, unworked	71,592	8,099	79,691
Ferroalloys	917,530	945,065	1,862,595
Lead & zinc, unworked	49,676	87,683	137,359
Aluminum & alloys, unworked	185,500	74,775	260,275
Fabricated metal products	153,907	106,827	260,734
Machinery, except electrical	266,638	147,834	414,472
Electrical machinery & equipment	65,940	87,178	153,118
Motor vehicles, parts, equipment	76,636	6,749	83,385
Ships and boats	2,902	5,590	8,492
Miscellaneous manufactured products	2,917	104,158	107,075
Iron and steel scrap	478,359	1,475,417	1,953,776
Nonferrous metal scrap	63,466	32,982	96,448
Waste and scrap, n.e.c.	--	180,520	180,520
Water	--	292,469	292,469
Waterway improvement materials	--	6,941,386	6,941,386
Miscellaneous	795,408	459,483	1,254,891
GRAND TOTAL	212,169,751	218,000,928	430,170,679

Missouri River

SECTION: From Fort Benton, Montana, to the mouth of the Missouri River - 2073.2 miles

CONTROLLING DEPTHS: 7.5 to 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	7,483,708	1,329,899,221
1972	7,182,841	1,280,384,981
1973	6,370,838	884,405,933
1974	7,673,084	1,227,524,876
1975	6,208,426	1,105,811,014
1976	6,552,949	1,535,911,975
1977	6,734,850	1,596,283,935
1978	7,929,184	1,528,614,096
1979	7,684,738	1,518,549,496

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons
Grain and grain products	1,323,453
Soybeans	226,936
Sand, gravel, crushed rock	3,976,052
Nonmetallic minerals, n.e.c.	93,596
Tallow, animal fats and oils	60,679
Prepared animal feeds	189,489
Molasses	146,143
Vegetable oils, margarine, shortening	69,637
Sodium hydroxide	16,711
Alcohols	37,821
Basic chemicals and products, n.e.c.	15,835
Gasoline	73,812
Other petroleum and coal products	47,958
Coke, petroleum coke	55,196
Fertilizer and materials	479,910
Building cement	159,952
Iron and steel products	109,985
Waterways improvement materials	562,784
Miscellaneous	38,789
GRAND TOTAL	7,684,738

Monongahela River

SECTION: From Pittsburgh, Pennsylvania, at the Monongahela River's confluence with the Ohio and Allegheny Rivers to Fairmont, West Virginia - 129 miles

CONTROLLING DEPTHS: 7 to 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	35,670,419	1,420,170,445
1972	38,624,403	1,527,938,779
1973	37,592,584	1,494,803,894
1974	38,265,899	1,641,720,394
1975	37,268,425	1,538,912,980
1976	36,489,211	1,519,897,770
1977	34,420,145	1,351,745,761
1978	31,673,799	1,223,814,273
1979	38,222,785	1,590,765,057

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons
Limestone	319,352
Iron ore and concentrates	365,340
Manganese ores and concentrates	277,731
Coal and lignite	31,418,936
Sand, gravel, crushed rock	1,320,236
Nonmetallic minerals, n.e.c.	189,442
Crude tar, oil, gas products	156,861
Benzene and toluene	124,715
Sulphuric acid	15,200
Basic chemicals and products, n.e.c.	138,419
Gasoline	842,023
Kerosene	50,421
Distillate fuel oil	522,477
Residual fuel oil	493,524
Lubricating oils and greases	10,417
Asphalt, tar and pitches	202,556
Coke, petroleum coke	157,383
Building cement	49,572
Iron and steel products	1,190,455
Ferroalloys	88,014
Fabricated metal products	27,338
Iron and steel scrap	160,718
Miscellaneous	101,655
GRAND TOTAL	38,222,785

Ohio River

SECTION: From Pittsburgh, Pennsylvania, at junction of Allegheny and Monongahela Rivers, to the Ohio River's confluence with the Mississippi River at Cairo, Illinois - 981 miles

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

	Inland Waterways		Oceangoing	
Year	Net Tons	Ton-Miles	Net Tons	Ton-Miles
1971	133,335,784	30,896,445,937	28,121	9,038,912
1972	138,848,346	32,055,617,509	29,346	10,849,428
1973	135,724,305	29,925,212,855	36,170	16,984,756
1974	139,258,864	31,929,318,977	35,349	15,765,982
1975	140,038,398	32,313,473,639	19,916	6,940,114
1976	148,394,558	34,358,944,032	23,252	12,704,985
1977	151,372,496	37,453,616,476	30,121	13,815,683
1978	152,558,561	38,823,847,854	12,456	5,790,596
1979	165,311,190	43,396,484,098	9,729	4,678,032

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons
Grain and grain products	6,914,540
Soybeans	1,635,501
Iron ores and concentrates	773,572
Aluminum ore, concentrates	169,735
Manganese ores and concentrates	803,777
Nonferrous ores, concentrates, n.e.c.	545,171
Coal and lignite	83,120,445
Crude petroleum	728,463
Limestone	1,478,408
Sand, gravel, crushed rock	21,556,428
Clay and structural clay products	109,620
Sulphur liquid	194,157
Nonmetallic minerals, n.e.c.	2,278,814
Prepared animal feeds	235,509
Sugar	36,958
Molasses	46,572
Vegetable oils, margarine, shortening	375,687
Standard newsprint paper	16,557
Paper and paperboard	16,594
Sodium hydroxide	493,337
Crude tar, oil, gas products	749,538
Alcohols	926,777
Benzene and toluene	477,248
Sulphuric acid	227,173
Basic chemicals and products, n.e.c.	7,281,903
Plastic materials	88,649

(Continued)

Commodity	Net Tons
Fertilizer and fertilizer materials	1,479,591
Miscellaneous chemical products	179,088
Gasoline	8,028,829
Jet fuel	923,423
Kerosene	294,656
Distillate fuel oil	4,781,602
Residual fuel oil	3,624,698
Lubricating oils and greases	758,080
Naphtha, petroleum solvents	380,066
Asphalt, tar and pitches	1,872,972
Coke, petroleum coke	725,749
Liquefied gases	17,177
Other petroleum and coal products	43,345
Glass and glass products	22,448
Building cement	1,157,183
Lime	847,656
Pig iron	99,447
Slag	156,976
Ferroalloys	755,446
Iron and steel products	3,484,458
Copper alloys, unworked	814
Lead and zinc, unworked	64,937
Aluminum and alloys, unworked	47,322
Fabricated metal products	78,562
Machinery, except electrical	116,936
Electrical machinery and equipment	86,881
Ships and boats	654
Iron and steel scrap	675,965
Waste and scrap, n.e.c.	2,793
Waterway improvement materials	3,141,371
Miscellaneous	200,661
GRAND TOTAL	165,320,919

Ouachita-Black Rivers

SECTION: From Camden, Arkansas, on the Ouachita River to the mouth of Black River at the confluence with Red River in Louisiana - 336 miles

CONTROLLING DEPTH: 9 feet to Sterlington, Louisiana (193 miles); 6.5 feet from Sterlington to Camden, Arkansas (143 miles)

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	584,466	55,890,918
1972	839,221	101,949,140

(Continued)

Year	Net Tons	Ton-Miles
1973	749,836	108,551,284
1974	946,439	111,889,529
1975	957,881	117,770,724
1976	1,350,877	151,031,845
1977	1,041,580	135,976,136
1978	1,084,940	126,443,942
1979	1,170,215	148,559,409

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons
Grain and grain products	5,954
Soybeans	248,740
Crude petroleum	79,621
Sand, gravel, crushed rock	229,447
Logs	91,200
Crude tar, oil, gas products	13,989
Alcohols	17,469
Benzene and toluene	35,559
Basic chemicals and products. n.e.c.	27,448
Gasoline	20,681
Distillate fuel oil	10,729
Residual fuel oil	362,686
Other petroleum products	8,631
Miscellaneous	18,061
GRAND TOTAL	1,170,215

Potomac River

SECTION: From mouth to Giesboro Point at Washington, DC - 108 miles (includes Broad Creek, Nanjemoy Creek, Mattox Creek, Chicamuxen Creek, St. Clement Bay and Piscataway Creek)

CONTROLLING DEPTH: 20.5 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	8,639,605	477,296,971
1972	7,659,645	455,533,983
1973	8,074,656	578,515,157
1974	6,633,521	454,974,710
1975	5,205,169	354,303,374
1976	6,037,072	418,064,030
1977	6,476,344	444,774,563
1978	5,427,858	392,993,107
1979	5,204,930	330,586,279

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons Oceangoing	Inland Waterway	Total
Fresh fish, except shellfish	--	1,017	1,017
Shellfish, except prepared	--	60,759	60,759
Marine shells, unmanufactured	--	5,798	5,798
Paper and paperboard	221,372	--	221,372
Gasoline	4,741	--	4,741
Jet fuel		170,476	170,476
Distillate fuel oil	203,958	514,570	718,528
Residual fuel oil	1,163,527	2,510,529	3,674,056
Asphalt, tar and pitches	13,271	325,893	339,164
Miscellaneous	8,067	9,522	9,019
GRAND TOTAL	1,614,936	3,589,994	5,204,930

Sacramento River

SECTION: From mouth of river to Red Bluff via River route. (Includes commerce of Sacramento River Deepwater Ship Channel and the Port of Sacramento, California) - 248 miles

CONTROLLING DEPTHS: 6 to 29 feet; Port of Sacramento - 30 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	4,920,485	168,137,575
1972	1,770,489	74,453,737
1973	2,044,519	95,705,437
1974	1,485,044	61,407,313
1975	1,788,843	72,719,306
1976	1,756,051	69,809,319
1977	1,602,291	64,389,057
1978	1,760,717	77,941,127
1979	2,065,089	90,088,944

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons Oceangoing	Inland Waterway	Total
Grain and grain products	884,617	--	884,617
Oilseeds, n.e.c.	22,413	--	22,413
Sand, gravel, crushed rock	--	45,790	45,790
Prepared animal feeds	11,428	--	11,428

(Continued)

Commodity	Net Tons Oceangoing	Inland Waterway	Total
Logs	119,165	--	119,165
Wood chips, staves, moldings	555,660	--	555,660
Fertilizer and fertilizer materials	130,937	--	130,937
Basic chemicals and products, n.e.c.	240,543	--	240,543
Iron and steel products	9,454	--	9,454
Iron and steel scrap	16,494	--	16,494
Miscellaneous	28,588	--	28,588
GRAND TOTAL	2,019,299	45,790	2,065,089

San Joaquin River

SECTION: From Stockton, California, to the mouth of San Joaquin River at Suisun Bay - 45 miles. From Stockton Channel to Hills Ferry - 86 miles

CONTROLLING DEPTHS: 3 to 30 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	6,839,741	201,473,386
1972	3,025,392	70,315,229
1973	3,706,593	81,336,734
1974	3,722,780	69,014,909
1975	4,124,421	84,296,941
1976	4,643,914	69,770,870
1977	3,507,137	70,881,198
1978	2,638,522	70,260,649
1979	3,104,550	74,480,203

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons Oceangoing	Inland Waterway	Total
Cotton, raw	8,548	--	8,548
Grain and grain products	635,098	--	635,098
Oilseeds, n.e.c.	26,980	--	26,980
Limestone	642,827	--	642,827
Sand, gravel, crushed rock	--	53,012	53,012

(Continued)

Commodity	Net Tons		
	Oceangoing	Inland Waterway	Total
Clay and structural clay products	54,512	--	54,512
Salt	--	149,730	149,730
Prepared animal feeds	108,928	--	108,928
Molasses	14,055	--	14,055
Sodium hydroxide	14,704	--	14,704
Alcohols	6,069	--	6,069
Basic chemicals and products, n.e.c.	149,517	9,990	159,507
Fertilizer and fertilizer materials	140,518	--	140,518
Jet fuel	110,096	--	110,096
Lubricating oils and greases	22,103	--	22,103
Residual fuel oil	8,275	--	8,275
Coke, petroleum coke	532,493	--	532,493
Cement	279,414	--	279,414
Iron and steel scrap	43,709	--	43,709
Nonferrous metal scrap	14,516	--	14,516
Miscellaneous	79,456	--	79,456
GRAND TOTAL	2,891,818	212,732	3,104,550

Snake River

OREGON, WASHINGTON AND IDAHO

SECTION: Mouth of Snake River to Johnson Bar Landing

CONTROLLING DEPTH: 14 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	975,489	--
1972	1,735,391	--
1973	1,760,946	--
1974	1,729,725	--
1975	2,010,721	--
1976	2,894,606	210,093,845
1977	2,911,249	214,892,369
1978	3,852,302	319,423,288
1979	4,356,735	333,137,838

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons
Grain	3,059,617
Logs	42,582
Wood chips, staves, moldings	53,723
Paper and paperboard	30,815
Pulp and paper products, n.e.c.	4,025
Basic chemicals and products, n.e.c.	23,683
Nitrogenous chemical fertilizers	21,368
Gasoline	394,372
Jet fuel	27,427
Distillate fuel oil	334,638
Asphalt, tar and pitches	25,183
Fabricated metal products	20,817
Waste and scrap, n.e.c.	264,501
Miscellaneous	53,984
GRAND TOTAL	4,356,735

Tennessee River

SECTION: From the junction of French and Holston Rivers at Knoxville, Tennessee, to the Tennessee River's confluence with the Ohio River at Paducah, Kentucky - 650 miles

CONTROLLING DEPTH: 9 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	27,685,211	3,960,491,547
1972	28,529,732	3,755,867,106
1973	29,346,595	3,928,498,660
1974	27,123,623	3,578,808,825
1975	28,316,539	3,915,824,883
1976	26,254,165	3,663,744,641
1977	26,583,240	3,747,588,855
1978	31,634,492	4,416,600,076
1979	31,398,039	5,061,973,955

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

Commodity	Net Tons
Grain and grain products	1,934,403
Soybeans	409,964
Manganese ores and concentrates	244,347
Nonferrous ores and concentrates, n.e.c.	144,381
Coal and lignite	14,945,697
Limestone	802,167
Sand, gravel, crushed rock	3,433,345

(Continued)

Commodity	Net Tons
Nonmetallic minerals, n.e.c.	663,256
Prepared animal feeds	109,568
Vegetable oils, margarine, shortening	121,617
Pulpwood, log	438,637
Pulp	66,689
Paper and paperboard	90,400
Sodium hydroxide	309,182
Crude tar, oil and gas products	252,859
Alcohols	38,304
Sulphuric acid	75,032
Basic chemicals and products, n.e.c.	1,667,677
Fertilizer and fertilizer materials	333,333
Miscellaneous chemical products	97,929
Gasoline	546,937
Jet fuel	19,147
Distillate fuel oil	465,330
Residual fuel oil	654,436
Lubricating oils and greases	76,597
Asphalt, tar and pitches	563,947
Coke, petroleum coke	83,426
Liquefied gases	13,508
Other petroleum and coal products	35,145
Glass and glass products	22,448
Building cement	176,878
Slag	31,685
Iron and steel products	545,272
Ferroalloys	152,053
Aluminum and alloys, unworked	17,087
Fabricated metal products	18,000
Machinery, except electrical	28,860
Electrical machinery and equipment	84,057
Iron and steel scrap	126,400
Waterway improvement materials	1,373,414
Miscellaneous	184,625
GRAND TOTAL	31,398,039

Willamette River

SECTION: From Corvallis, Oregon, to the Willamette River's confluence with the Columbia River at Portland, Oregon - 132 miles

CONTROLLING DEPTHS: 2.5 to 8 feet

TOTAL ANNUAL TRAFFIC

Year	Net Tons	Ton-Miles
1971	5,277,592	23,248,472
1972	4,683,635	20,639,560
1973	4,411,295	20,227,999
1974	5,985,994	27,240,208
1975	4,999,407	21,538,874
1976	5,675,462	23,451,846
1977	5,186,344	60,233,056
1978	5,740,725	24,516,162
1979	4,999,732	23,612,153

PRINCIPAL COMMODITIES FOR CALENDAR YEAR 1979

	Net Tons		
Commodity	Oceangoing	Inland Waterway	Total
Clay and clay products	--	41,902	41,902
Limestone	105,480	--	105,480
Sand, gravel, crushed rock	275,194	3,459,094	3,734,288
Grain mill products, n.e.c.	--	5,890	5,890
Rafted logs	--	524,437	524,437
Wood chips, staves, moldings	--	99,226	99,226
Pulp	--	30,253	30,253
Pulp and paper products, n.e.c.	--	391,347	391,347
Residual fuel oil	--	29,838	29,838
Basic chemicals and products, n.e.c.	23,012	328	23,340
Miscellaneous	1,455	12,276	13,731
GRAND TOTAL	405,141	4,594,591	4,999,732